

## REMARKS

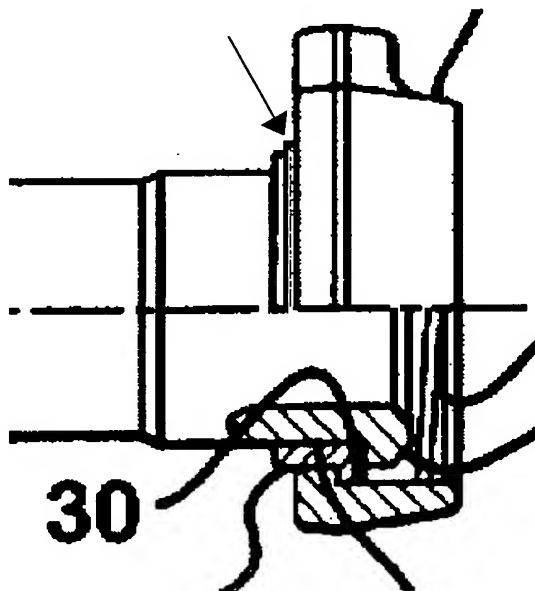
### **A. Status of the Claims**

Claims 1-12 were examined. No claims have been amended or added. Claims 1-12 are, therefore, pending. A clean, unofficial copy of the claims is attached as Appendix A for the Office's convenience.

### **B. The Proposed Drawing Amendment Has Support and Should Be Entered**

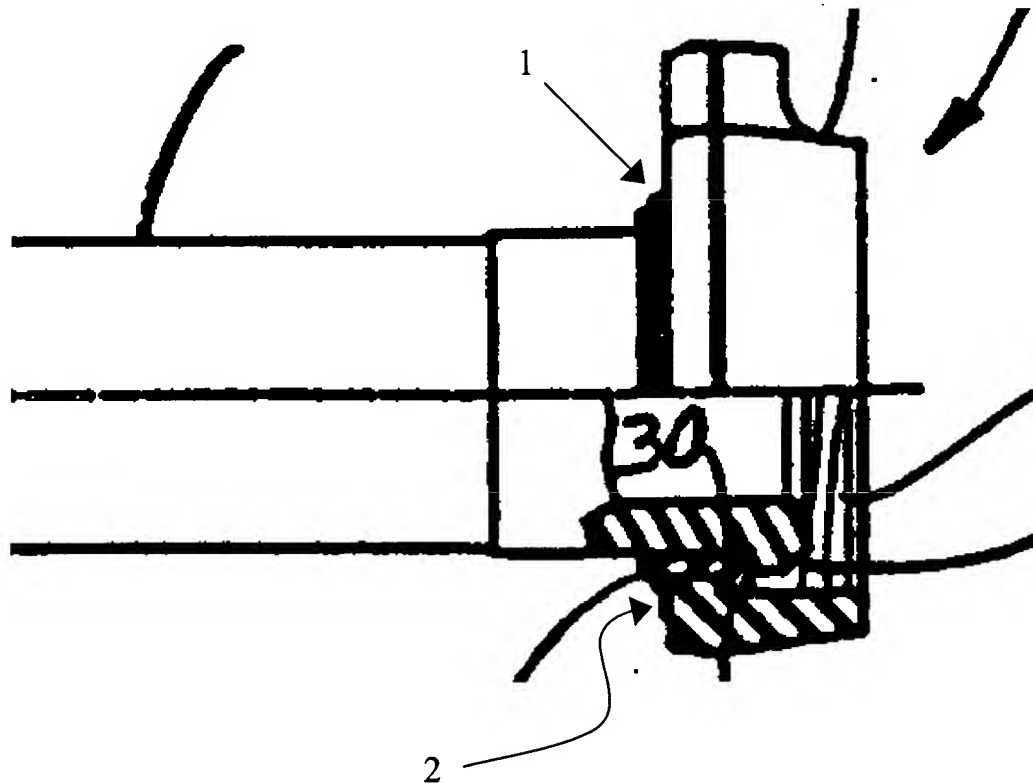
The Office has disapproved the proposed correction to FIG. 1. The Office states that while the lead line changes appear acceptable, the unnumbered retainer ring lacks support. Applicant respectfully traverses.

The top half of the retainer ring is correctly shown in the version of FIG. 1 printed in U.S. Pat. No. 5,791,693. This is shown below with an arrow:



Support, therefore, already exists in this figure.

The same support also exists in originally-filed FIG. 1 (arrow "1" below). Moreover, support exists in the line designated by arrow "2" below:



The Office is respectfully requested to enter the proposed correction to FIG. 1 in view of the support in these figures.

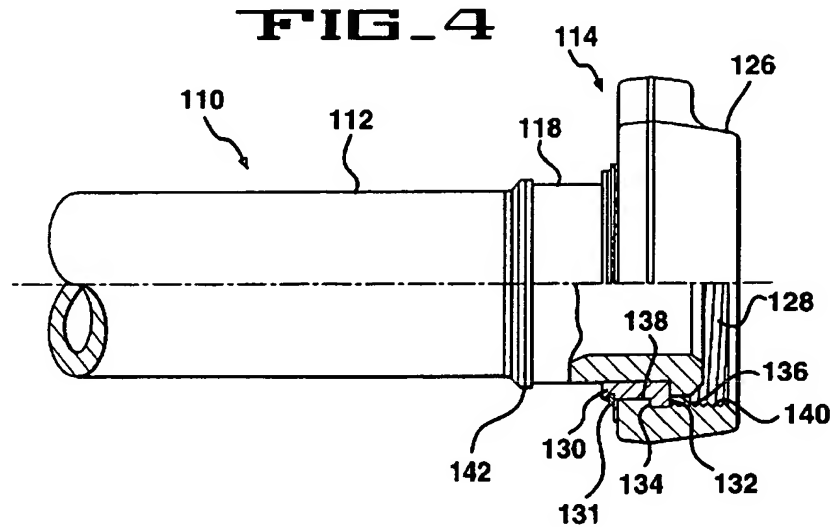
#### C. Claims 1-12 Are Patentable Over the Cited References

The Office rejects claims 1-12 as being obvious over Applicant's prior art figures 1 and 2 in view of the drawing labeled "CROSSOVER ASSY" from reference C2 and U.S. Pat. No. 5,350,205 to Aldridge et al. ("Aldridge"). Applicant respectfully traverses.

##### 1. Claims 1-8

Independent claims 1 and 5 are both directed to a pup joint. The pup joint includes a length of pipe and a male sub connected to the distal end of the length of pipe. The pup joint also includes "a retention shoulder extending radially outwardly from **the male sub . . .**" (Emphasis

added). An example of the claimed retention shoulder is shown in FIG. 4 of this application, which depicts pup joint 110, length of pipe 112, male sub 114 and retention shoulder 142 extending radially outwardly from male sub 114:

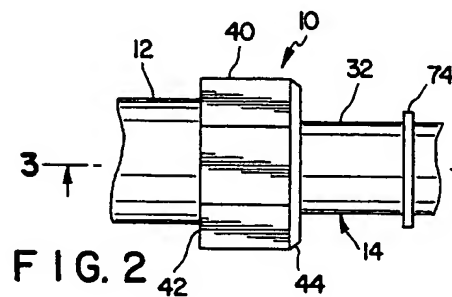


None of the cited references teaches or suggests the claimed retention shoulder.

The Office asserts that Aldridge “shows . . . that it is old and well known to provide a retention shoulder 74 extending radially outwardly from the section of the male member . . . .”

Action at page 4.<sup>1</sup> This is not, however, what Aldridge teaches.

Aldridge discloses a snap ring 74 “dimensioned to be snapped into the groove 38 in the outer circumference 32 of the flanged nipple 14” (col. 6, lines 53-55):



<sup>1</sup> Claims 1-8 recite a “male sub,” not a “male member.”

Even assuming snap ring 74 is properly characterized as retention shoulder (and Applicant does not concede this), snap ring 74 is positioned on the pipe section of flanged nipple 14 as FIG. 2 shows. Snap ring 74 **does not** extend radially outwardly from a male sub that is connected to that pipe section.

The Office offers no explanation for why the pipe section of flanged nipple 14, in which snap ring 74 rests, meets the claimed male sub limitation of independent claims 1 and 5. The Office, instead, appears to read the claims as requiring that the retention shoulder extend radially outwardly **from the length of pipe**, rather than **from the male sub**, as required by claims 1 and 5:

[I]t would have been obvious to one having ordinary skill in the art at the time the invention was made to provide **the length of pipe with a retention shoulder** as taught by shoulder 74 of [Aldridge] . . . .

Action at page 5 (emphasis added). While Aldridge may, for argument's sake, show the former, it does not show the latter.

The Office has not asserted that either prior art figures 1 or 2, or the cited page from reference C2 teaches the claimed retention shoulder. Accordingly, the Office has not made out a *prima facie* case of obviousness because the cited references fail to teach or suggest all the claim limitations. See M.P.E.P. § 2143. The Office is requested to allow claims 1-8.

## 2. Claims 9-12

Independent claim 9 is directed to a pup joint. The pup joint includes a length of pipe and a male sub connected to the distal end of the length of pipe. The male sub includes "a section having **an outside diameter greater than the outside diameter of the length of pipe** . . . ." (Emphasis added). The pup joint also includes "a retention shoulder extending radially

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INCLUDES  
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UNDERSTANDING

outwardly from **the section of the male sub . . . .**” (Emphasis added). None of the cited references teaches or suggests the claimed retention shoulder.

The Office asserts that Aldridge “shows . . . that it is old and well known to provide a retention shoulder 74 extending radially outwardly from the section of the male member . . . .” Action at page 4. This is not what Aldridge teaches.

Aldridge does not teach or suggest a retention shoulder that extends radially outwardly from the section of a male sub that has a greater outer diameter than the outer diameter of the length of pipe to which the male sub is connected. Aldridge discloses a snap ring 74 positioned on the pipe section of flanged nipple 14, as shown above in FIG. 2. Snap ring 74 **does not** extend radially outwardly from a male sub that is connected to that pipe section, much less from a section of a male sub with a greater diameter than that pipe section.

The Office offers no explanation for why the pipe section of flanged nipple 14, in which snap ring 74 rests, meets the claimed section of the male sub limitation of independent claim 9. The Office, instead, appears to read the claims as requiring that the retention shoulder extend radially outwardly **from the length of pipe**, rather than **from the section of the male sub**, as required by claim 9:

[I]t would have been obvious to one having ordinary skill in the art at the time the invention was made to provide **the length of pipe with a retention shoulder** as taught by shoulder 74 of [Aldridge] . . . .

Action at page 5 (emphasis added). While Aldridge may, for argument’s sake, show the former, it does not show the latter.

The Office has not asserted that either prior art figures 1 or 2, or the cited page from reference C2 teaches the claimed retention shoulder. Accordingly, the Office has not made out a

*prima facie* case of obviousness because the cited references fail to teach or suggest all the claim limitations. See M.P.E.P. § 2143. The Office is requested to allow claims 9-12.

### **3. Claims 3, 8, and 11**

The Office asserts that the limitation in claims 3, 8, and 11 that the retention shoulder is machined into the male sub is a “process limitation” that does not serve to resolve the patentability of those claims. Action at page 5. Applicants respectfully traverse.

This limitation from claims 3, 8, and 11 is more than a process limitation. It requires that the retention shoulder be integral with the male sub. The retention shoulder could not be machined into the male sub were the two not integral. The limitation is therefore a meaningful structural limitation that should be given patentable weight. The limitation, moreover, further distinguishes Aldridge, which shows only a snap ring resting in a groove on the pipe section of a flanged nipple.

For these additional reasons, claims 3, 8, and 11 are patentable over the cited references.

### **D. Petition for Extension of Time**

Pursuant to 37 C.F.R. § 1.136(a), Applicant petition for an extension of time of one month up to and including May 21, 2003 in which to respond to the Office Action dated January 21, 2002. The Commissioner is authorized to deduct the process fee for this one-month extension of time, along with any additional fees under 37 C.F.R. §§ 1.16 to 1.21 required for any reason relating to the enclosed materials, from Fulbright & Jaworski Deposit Account No.: 50-1212/FMCC:014USR1/MTG.

**E. Conclusion**

Applicant respectfully submit that claims 1-12 are in condition for allowance. Should Examiner Eric Nicholson have any questions concerning this application, he is invited to contact the undersigned attorney at (512) 536-3031.

Respectfully submitted,



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Date: April 30, 2003

**APPENDIX A - CLEAN COPY (UNOFFICIAL) OF PENDING CLAIMS**  
**FOR SERIAL NO. 10/008,106**

1. A pup joint comprising:

a length of pipe having an outside diameter;

a female sub connected to a first end of the length of pipe, the female sub including a conical sealing surface, an outer surface formed adjacent the conical sealing surface and external threads formed on the outer surface;

a male sub connected to the distal end of the length of pipe, the male sub including a section having an outside diameter greater than the outside diameter of the length of pipe, the male sub also including a forward shoulder extending radially outwardly therefrom and a spherical sealing surface adjacent the forward shoulder which is adapted to mate with and seal against the conical sealing surface of another such pup joint;

a nut having an internal surface, internal threads formed on the internal surface and a rearward shoulder extending radially inwardly from the internal surface;

one or more retainer segments positioned between the rearward shoulder of the nut and the forward shoulder of the male sub for restricting axial movement of the nut relative to the male sub in a first direction;

a retainer ring positioned in a corresponding groove formed in the retainer segments and having an outer diameter which is greater than the diameter of the rearward shoulder to thereby maintain the nut positioned around the retainer segments; and



a retention shoulder extending radially outwardly from the male sub positioned rearwardly of the forward shoulder, the retention shoulder comprising an outside diameter greater than the inside diameter of the retainer segments;

whereby the retention shoulder restricts axial movement of the nut and the retainer segments relative to the male sub in a direction opposite the first direction.

2. The pup joint of claim 1, wherein the male sub and the female sub are formed integral with the length of pipe.

3. The pup joint of claim 2, wherein the length of pipe, the male sub and the female sub are constructed of a single forging and the retention shoulder is machined into the male sub.

4. The pup joint of claim 1, wherein the male sub is threaded onto the distal end of the length of pipe, and the female sub is threaded onto the first end of the length of pipe.

5. A pup joint comprising:

a length of pipe having an outside diameter;

a female sub connected to a first end of the length of pipe, the female sub including a conical sealing surface, an outer surface formed adjacent the conical sealing surface and external threads formed on the outer surface;

a male sub connected to the distal end of the length of pipe, the male sub including a forward shoulder extending radially outwardly therefrom and a spherical sealing surface adjacent the forward shoulder which is adapted to mate with and seal against the conical sealing surface of another such pup joint;

a nut having an internal surface, internal threads formed on the internal surface and a rearward shoulder extending radially inwardly from the internal surface;

one or more retainer segments positioned between the rearward shoulder of the nut and the forward shoulder of the male sub for restricting axial movement of the nut relative to the male sub in a first direction, the one or more retainer segments having an inside diameter greater than the outside diameter of the length of pipe; a retainer ring positioned in a corresponding groove formed in the retainer segments and having an outer diameter which is greater than the diameter of the rearward shoulder to thereby maintain the nut positioned around the retainer segments; and a retention shoulder extending radially outwardly from the male sub rearwardly of the forward shoulder, the retention shoulder comprising an outside diameter greater than the inside diameter of the retainer segments; whereby the retention shoulder restricts axial movement of the nut and the retainer segments relative to the male sub in a direction opposite the first direction.

6. The pup joint of claim 5, wherein the male sub and the female sub are formed integral with the length of pipe.

7. The pup joint of claim 6, wherein the length of pipe, the male sub and the female sub are constructed of a single forging and the retention shoulder is machined into the male sub.

8. The pup joint of claim 5, wherein the male sub is threaded onto the distal end of the length of pipe, and the female sub is threaded onto the first end of the length of pipe.

9. A pup joint comprising:

a length of pipe having an outside diameter;

a female sub connected to a first end of the length of pipe, the female sub including a conical sealing surface, an outer surface formed adjacent the conical sealing surface and external threads formed on the outer surface;

a male sub connected to the distal end of the length of pipe, the male sub including a section having an outside diameter greater than the outside diameter of the length of pipe, the male sub also including a forward shoulder extending radially outwardly therefrom and a spherical sealing surface adjacent the forward shoulder which is adapted to mate with and seal against the conical sealing surface of another such pup joint;

a nut having an internal surface, internal threads formed on the internal surface and a rearward shoulder extending radially inwardly from the internal surface;

one or more retainer segments positioned between the rearward shoulder of the nut and the forward shoulder of the male sub for restricting axial movement of the nut relative to the male sub in a first direction;

a retainer ring positioned in a corresponding groove formed in the retainer segments and having an outer diameter which is greater than the diameter of the rearward shoulder to thereby maintain the nut positioned around the retainer segments; and

a retention shoulder extending radially outwardly from the section of the male sub, the retention shoulder positioned rearwardly of the forward shoulder, the retention shoulder comprising an outside diameter greater than the inside diameter of the retainer segments, the outside diameter of the retention shoulder also being greater than both the outside diameter of the length of pipe and the outside diameter of the section of the male sub;

whereby the retention shoulder restricts axial movement of the nut and the retainer segments relative to the male sub in a direction opposite the first direction.

10. The pup joint of claim 9, wherein the male sub and the female sub are formed integral with the length of pipe.

11. The pup joint of claim 10, wherein the length of pipe, the male sub and the female sub are constructed of a single forging and the retention shoulder is machined into the male sub.

12. The pup joint of claim 9, wherein the male sub is threaded onto the distal end of the length of pipe, and the female sub is threaded onto the first end of the length of pipe.